

REMARKS

These remarks are set forth in response to the non-final office action mailed September 30, 2003 (the "Office Action"). As this amendment has been timely filed within the three-month statutory period, neither an extension of time nor a fee is required. Presently, claims 1 through 27 are pending in the Patent Application. In the Office Action, claims 1, 2, 6, 7, 12, 13, 17, 18, 22, 23 and 27 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,076,108 to Courts et al. ("Courts") in view of U.S. Patent 6,515,988 to Eldridge et al. ("Eldridge I"). Also, claims 3-5, 14-16, and 24-26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Courts in view of Eldridge I and further in view of U.S. Patent No. 6,490,682 to Vanstone et al. ("Vanstone").

Claims 8, 9 and 19 further have been rejected under 35 U.S.C. §103(a) as being unpatentable over Courts in view of Eldridge I and further in view of U.S. Patent No. 6,006,264 to Colby et al. ("Colby"). Also, claims 10 and 20 yet further have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,397,261 to Eldridge et al. ("Eldridge II") in view of Courts. Finally, claims 11 and 21 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Eldridge II in view of Courts and further in view of Colby. In response, the Applicants respectfully have traversed the rejections set forth in the Office Action and the Applicants further have set forth arguments establishing the patentability of each of the claims as recited in the originally filed Patent Application.

Prior to addressing the rejections on the art, a brief review of the Applicant's invention is appropriate. The Applicants have invented a new and non-obvious method, system and apparatus for cookie-enabled persistent binding of a client to a server during a transactional

session between the client and server. In accordance with the invention recited in the Patent Application, a session routing token can be inserted in a uniform resource locator (URL) implemented hypertext transfer protocol (HTTP) request during an HTTP-based communications session between a client and a server. Consequently, a dispatching mechanism can route client HTTP requests to the server during the session based upon server identifying information disposed in the token in the URL. Prior to routing the requests to the designated server, however, the token can be removed from the URL.

Importantly, a data store of cookies for different clients (a "server-side cookie jar") can be coupled to the dispatching mechanism. Once the cookie jar has been coupled to the dispatching mechanism, a token in the URL can be used to retrieve a corresponding cookie in the server-side cookie jar. The retrieved cookie, in turn, can be inserted into the URL before the HTTP request can be forwarded to the server identified by the token. Conversely, as content is returned to the requesting client, a cookie can be inserted into the URL handling the HTTP response which can be removed from the URL by the dispatching mechanism and placed in the server-side cookie jar for retrieval during a subsequent request by the client.

In this way, the server can receive the HTTP request embodied by the URL along with the corresponding cookie as if the cookie had been placed in the URL by the client. In actuality, however, the cookie will have been inserted into the URL by way of the dispatching mechanism in consequence of the identifying information provided by the token in the URL. Several advantages can result from the inventive arrangements described herein. First, cookie-dependent technologies can co-exist with ultra-thin and ultra-secure clients which do not permit the external writing of cookies by external entities. Rather, the cookies themselves can be stored server-side

and can be identified through the use of the embedded token. Also, session affinity between client and server can be maintained through the use of a token embedded in the HTTP request (literally, the URL). Consequently, unreliable routing of HTTP requests for session affinity based upon the network address of a preferred server can be avoided, particularly, where intermediate or hidden addressing schemes such as network address translation are used.

Turning now to the rejections on the art, claims 1, 2, 6, 7, 12, 13, 17, 18, 22, 23 and 27 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Courts in view of Eldridge I. Also, claims 3-5, 14-16, and 24-26 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Courts in view of Eldridge I and further in view of Vanstone. Finally, claims 8, 9 and 19 further have been rejected under 35 U.S.C. §103(a) as being unpatentable over Courts in view of Eldridge I and further in view of Colby. Specifically referring to Courts, the technology disclosed in Courts relates to the maintenance of state for a user session using a Web system coupled to a global session server.

In the Courts technology, as described in column 1, lines 45 through 62 of the Courts specification, a user request can be received responsive to which a session can be established between a requesting client and the Web system. Session data representing the state of the user session can be stored in memory in a global session server. For each subsequent request received from the client, the session data can be retrieved from the global session server. Using the session data, the subsequent request can be processed to provide a Web page to the user and the session data can be changed to reflect the processing. In this way, the Web system can remain stateless with respect to a n ongoing user interaction with the Web system freeing the Web system to effectively manage server load balancing and other speed issues.

Eldridge I, by comparison, relates to the controlled printing of documents between wireless devices and remotely positioned printers. As discussed in column 1 of the Eldridge I specification, it previously had been known to request the printing of a remotely disposed document merely by providing a reference to the printer containing an address of the remote document to be printed. Using the reference, for instance a URL, the printer can retrieve the document and can print the same. Eldridge I extends the known art to permit the inclusion of specific formatting instructions in a token provided to the printer. Importantly, as stated in column 1, lines 53 through 59 of the Eldridge I specification, the token can include both an operation component and an address component. The operation component can designate a document related operation while the address component can designate the electronic address of the document to be printed.

In the Office Action, Courts and Eldridge I have been cited in support of the following claimed teaching embodied in the rejected independent claims 1, 7, 12, 18, and 22 and the dependent claims 3-5, 8, 9, 14-16, 19 and 24-26:

1. Receiving in a network dispatching mechanism a request for information from an end user device where the request is indicated by a URL.
2. Determining by the network dispatching mechanism which of a plurality of servers are to satisfy the received request.
3. Creating at a selected one of the servers a token having an identifier for the selected server in addition to a key for accessing a storage area for information regarding a persistent relationship between the selected one of the servers and the end user device.

4. Inserting the token into the URL.
5. Sending by the selected one of the servers to the end user device a response with the token inserted into the URL.

More specifically, Courts has been cited for teaching claim limitations 1 and 2, while Eldridge has been cited for teaching claim limitations 3, 4 and 5. The combination of Courts and Eldridge, in this regard, has been cited in support of the rejection of each of claims 1, 2, 6, 7, 12, 13, 17, 18, 22, 23 and 27. Nevertheless, the Applicants respectfully disagree.

Specifically, while it is true that Courts discloses a general purpose dispatching mechanism in column 3, lines 5 through 7 (more specifically, a load balancer), it is not true that Eldridge I teaches the creation and use of a token configured with a key to access a storage area containing information regarding the persistent relationship between an end user device and the server. Moreover, Eldridge I wholly lacks a teaching directed to the insertion of the token in a URL. Rather, at best, Eldridge I recites the creation of a token using an address—not the reverse.

In fact, in column 9, lines 29 through 34, Eldridge I concedes that a URL is extracted from the token. Of course, it will be recognized by the skilled artisan that the operation of the Applicants' invention—namely, the rewriting of a URL to achieve a server-side cookie jar and session affinity—will be defeated by disposing the URL in a token, rather than disposing the token in the URL. To that end, by modifying the load balancer of Courts with the token passing mechanism of Eldridge I, the operation of Courts similarly would be defeated. Yet, where a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification

sufficient to support an obviousness-type rejection. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Importantly, the literal language of all of the independent claims of the Patent Application prohibits the combination of Eldridge I with Courts in support of an obviousness-type rejection. Specifically, the literal language calls for the insertion of a token “into the URL”. Eldridge I, however, does not include the “insertion” of a token in a URL. Similarly, the literal language of several other claims, including claim 7, require a determination of whether a URL “contains” a token. Again, in the teachings of Eldridge I, as the token contains the URL and not the contrary, it would not be possible for a determination to be performed of whether a URL “contains” a token.

Notably, Eldridge II has been cited in combination with Courts in support of the obviousness-type rejection of claims 10, 11, 20 and 21. Like Eldridge I, Eldridge II also is deficient in respect to the inclusion of a URL within a token, rather than the insertion of a token in a URL. More importantly, each of claims 10 and 20 recite the processing of a “key cookie”. Yet, Eldridge II wholly lacks any reference to a “cookie”. In page 5 of the Patent Application, the term “cookie” has been defined as “a data object transported in a variable-length field[s] within the HTTP header that is normally stored on the client, either for the duration of the session or permanently.”

In the Office Action, however, Eldridge II has been specifically cited for a “cookie” teaching based upon the “document tokens” of column 5, lines 15 through 24 of the Eldridge II specification. In that portion of Eldridge II, a “document token” has been specifically defined as “a superset of a uniform resource locator (URL) because document tokens include security

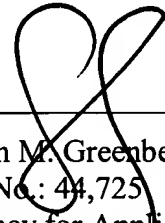
elements for authentication.” Clearly, the document token of Eldridge II is not a cookie as it will be recognized by those skilled in the art. As the bulk of claims 10 and 20 require the processing of a cookie, though, it cannot be said that the combination of Eldridge II and Courts teach every limitation recited in claims 10 and 20.

Claims 1 through 27 stand patentable as filed in as much as neither the combination of Courts and Eldridge I, nor the combination of Eldridge II and Courts sufficiently teach the requisite limitations of claims 1 through 27 in order to support the obviousness type rejections of the Office Action. As the teachings of Vanstone and Colby are necessary only to support more specific rejections of isolated limitations of the claims of the Patent Applications, the Applicants respectfully suggest that the combinations of the cited references are not sufficient to support the rejection of any of claims 1 through 27. For all of the above reasons, the claim objections are believed to have been overcome placing Claims 1 through 27 in condition for allowance, and reconsideration and allowance thereof is respectfully requested.

The Examiner is encouraged to telephone the undersigned to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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Steven M. Greenberg
Reg. No.: 44,725
Attorney for Applicant(s)
Christopher & Weisberg, P.A.
200 East Las Olas Boulevard, Suite 2040
Fort Lauderdale, Florida 33301
Customer No. 31292
Tel: (954) 828-1488
Fax: (954) 828-9122

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